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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,388	03/15/2004	Sung-Jen Hsiang		3159

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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,388	HSIANG, SUNG-JEN	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/15/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Action is responsive to Applicant's Application filed March 15, 2004. Please note Claims 1-12 are pending.

Priority

1. Acknowledgment is made of applicant's claim for the benefit of the filing date of a prior application filed in a foreign country under 35 U.S.C. 119(a)-(d) based upon an application 92105711 filed in TAIWAN on March 14, 2003.

Information Disclosure Statement

2. Information Disclosure Statements filed March 15, 2004 is considered and corresponding PTO-1449 is electronically signed and attached.

Drawings

3. The drawings, filed March 15, 2004 are considered in compliance with 37 CFR 1.81 and accepted.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.1. As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

4.2. Claims 1-7 and 12 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1, the claimed invention represents a sorting system comprises a database and sorting module, both are software product, however, the product lacks computer storage medium upon which the software product can reside in order to realize the functionalities as described in the software product, such that a tangible result can be produced. The sorting module described in the claim has functionalities for sorting, generating and integrating files. However, the functionalities are abstract because the functionalities are not realized to perform and produce tangible result. However, a tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory.

As per claim 12, the claimed invention represents a method comprises a database server comprising of files and a sorting module, both are software product. The claim describes functionalities that the software is able or intentional to perform, including sorting, generating and integrating files. However, the functionalities are abstract because the functionalities are performed to produce tangible result. However, a

tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory.

As per claims 2-7, which inherit and do not remedy the deficiency of practical application requirements of independent claim 1 and are likewise, non-statutory.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.1. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over pc/MRP for Windows, Version 7.70A, 1/6/03, Software Arts Consulting Inc., hereafter "pcMRP".

As per claim 1, pcMRP teaches "A bill of material (BOM) sorting system for sorting original BOMs" (See Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), the system comprising:

"a database server comprising an original BOM file which comprises information on parts for a product and a part specification file which comprises assembly methods of the parts" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed); and "a BOM sorting module for accessing the original BOM file and the part specification file, for sorting parts in the original BOM file according to the part specification file" (See Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files).

PcMRP does not explicitly teach that sorting BOM is "for generating a plurality of sub-files, and for integrating all the sub-files into an executable BOM file", although pcMRP teaches selecting desired data to create address book database file and merging data with document at Page 59, Step One, Step Two and Step Three.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to substitute the teaching of creating address book database file and merging data/document by generating and merging BOM files because the original teaching is utilized to audit and report discrepancies between BOM and master parts, and the substituting teaching would have enabled pcMRP system to efficiently generate BOM sub-files according to master parts, rectify the discrepancies between BOM and master part database files, and further create master part matched

BOM database file such that the substituting teaching would have extended the functions perform by the original, as evidenced by the implementation of later releases of pcMRP.

As per claim 8, pcMRP teaches "A bill of material (BOM) sorting method for sorting original bills of material (BOMs)" (Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), the method comprising the steps of:

"accessing an original BOM file and a part specification file" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed); and

"sorting parts in the original BOM file according to the part specification file" (See Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files).

PcMRP does not explicitly teach that sorting BOM is "generating a plurality of sub-files; and integrating all the sub-files into an executable BOM file", although pcMRP teaches selecting desired data to create address book database file and merging data with document at Page 59, Step One, Step Two and Step Three.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to substitute the teaching of creating address book database file and merging data/document by generating and merging BOM files because the original teaching is utilized to audit and report discrepancies between BOM and master parts, and the substituting teaching would have enabled pcMRP system to efficiently generate BOM sub-files according to master parts, rectify the discrepancies between BOM and master part database files, and further create master part matched BOM database file such that the substituting teaching would have extended the functions perform by the original, as evidenced by the implementation of later releases of pcMRP.

As per claim 12, pcMRP teaches "A method of sorting bill of material (BOM)" (See Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), comprising:
"providing a database server comprising an original BOM file, an executable BOM file and a part specification file" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed); and

"using a BOM sorting module to connect the database server via a database connection module and a database management module" (See Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files).

PcMRP does not explicitly teach that sorting BOM, "so as to integrate plural sub-files in said executable file, wherein said sub-files are generated by sorting parts in the original BOM file according to the part specification file", although pcMRP teaches selecting desired data to create address book database file and merging data with document at Page 59, Step One, Step Two and Step Three.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to substitute the teaching of creating address book database file and merging data/document by generating and merging BOM files because the original teaching is utilized to audit and report discrepancies between BOMs and master parts, and the substituting teaching would have enabled pcMRP system to efficiently generate BOM sub-files according to master parts, rectify the discrepancies between BOM and master part database files, and further create master part matched BOM database file such that the substituting teaching would have extended the functions perform by the original, the substituting teaching is desperately needed, as evidenced by the implementation of later releases of pcMRP.

As per claim 2, pcMRP teaches "The BOM sorting system according to claim 1, wherein the BOM sorting module is installed in each of a plurality of designing

computers" (See Page 58, item 4.1.9 and Page 11, item 2.1.2 where sort module is available in pc/MRP which is installed as single user or server mode).

As per claim 3, pcMRP teaches "The BOM sorting system according to claim 1, wherein the information on the parts comprise a part item name, amount of the part in the product, the part's position in the product, the part's specification, and a detailed description of the part" (See Page 65, item 5.1.4 where inventory menu displays part description, where used, quantity, assembly, part number and miscellaneous information, etc).

As per claim 4, pcMRP teaches "The BOM sorting system according to claim 1, wherein the data on the assembly methods of the parts comprise information on surface mount devices (SMD), pin through hole (PTH) and empty" (Examiner takes an official notice that different pattern files are generated and sorted in according to assembly sequence of components for SMD and PTH methods for planting components on a printed circuit board is well known to a skilled ordinary at the time of the applicant's invention was made, for example, Examiner personally witnessed the surface mount production line replacing through hole assembly line for manufacturing modems where pattern files were generated at a MicroVAX and downloaded to PDP11-controlled assembly workstations when practicing a senior electronics engineer position with Racal Milgo/Racal DataCom for a decade in the 80-90's).

As per claim 5, pcMRP teaches "The BOM sorting system according to claim 1, wherein the sub-files comprise an SMD sub-file, a PTH sub-file and an empty sub-file corresponding to different assembly methods" (Examiner takes an official notice that different pattern files are generated and sorted in according to assembly sequence of components for SMD and PTH methods for planting components on a printed circuit board is well known to a skilled ordinary at the time of the applicant's invention was made, for example, Examiner personally witnessed the surface mount production line replacing through hole assembly line for manufacturing modems where pattern files were generated at a MicroVAX and downloaded to PDP11-controlled assembly workstations when practicing a senior electronics engineer position with Racal Milgo/Racal DataCom for a decade in the 80-90's)

As per claim 6, pcMRP teaches "The BOM sorting system according to claim 1, further comprising a database connection module for connecting the BOM sorting module with the files in the database server, wherein the files comprises the part specification file, the original BOM file and the executable BOM file" (See Page 76, item 5.1.9 and Page 58, item 4.1.9 where an application in the form of menu connects to database allowing users to scroll, edit, delete, undelete and query against records in inventory database and sorting records accordingly).

As per claim 7, pcMRP teaches "The BOM sorting system according to claim 1, wherein the database server comprises a database management module for managing

the part specification file, the original BOM file and the executable BOM file, and for creating, adding, deleting, updating and inquiring records in said files" (See Page 76, item 5.1.9 and Page 58, item 4.1.9 where an application in the form of menu connects to database allowing users to scroll, edit, delete, undelete and query against records in inventory database and sorting records accordingly).

As per claim 9, pcMRP teaches "The BOM sorting method according to claim 8, wherein the part specification file comprises assembly methods of parts" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed).

As per claim 10, pcMRP teaches "The BOM sorting method according to claim 9, wherein the assembly methods comprise surface mount devices (SMD), pin through hole (PTH) and empty" (Examiner takes an official notice that different pattern files are generated and sorted in according to assembly sequence of components for SMD and PTH methods for planting components on a printed circuit board is well known to a skilled ordinary at the time of the applicant's invention was made, for example, Examiner personally witnessed the surface mount production line replacing through hole assembly line for manufacturing modems where pattern files were generated at a

MicroVAX and downloaded to PDP11-controlled assembly workstations when practicing a senior electronics engineer position with Racal Milgo/Racal DataCom for a decade in the 80-90's).

As per claim 11, pcMRP teaches "The BOM sorting method according to claim 8, wherein the sub-files comprise an SMD sub-file, a PTH sub-file and an empty sub-file" (Examiner takes an official notice that different pattern files are generated and sorted in according to assembly sequence of components for SMD and PTH methods for planting components on a printed circuit board is well known to a skilled ordinary at the time of the applicant's invention was made, for example, Examiner personally witnessed the surface mount production line replacing through hole assembly line for manufacturing modems where pattern files were generated at a MicroVAX and downloaded to PDP11-controlled assembly workstations when practicing a senior electronics engineer position with Racal Milgo/Racal DataCom for a decade in the 80-90's).

Conclusion

6. The prior art made of record

U. pc/MRP for Windows, Version 7.70A, 1/6/03, Software Arts Consulting Inc.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. U.S. Patent No. 6,247,128

B. U.S. Patent No. 6,898,472

C. U.S. Patent No. 6,871,113

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu

Patent Examiner, Art Unit 2167

September 6, 2006